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FEB 28 2005
PATENT & TRADEMARK OFFICE

FIG. 4

PROTECTED DOCUMENT CREATION AND STORAGE FLOWCHART

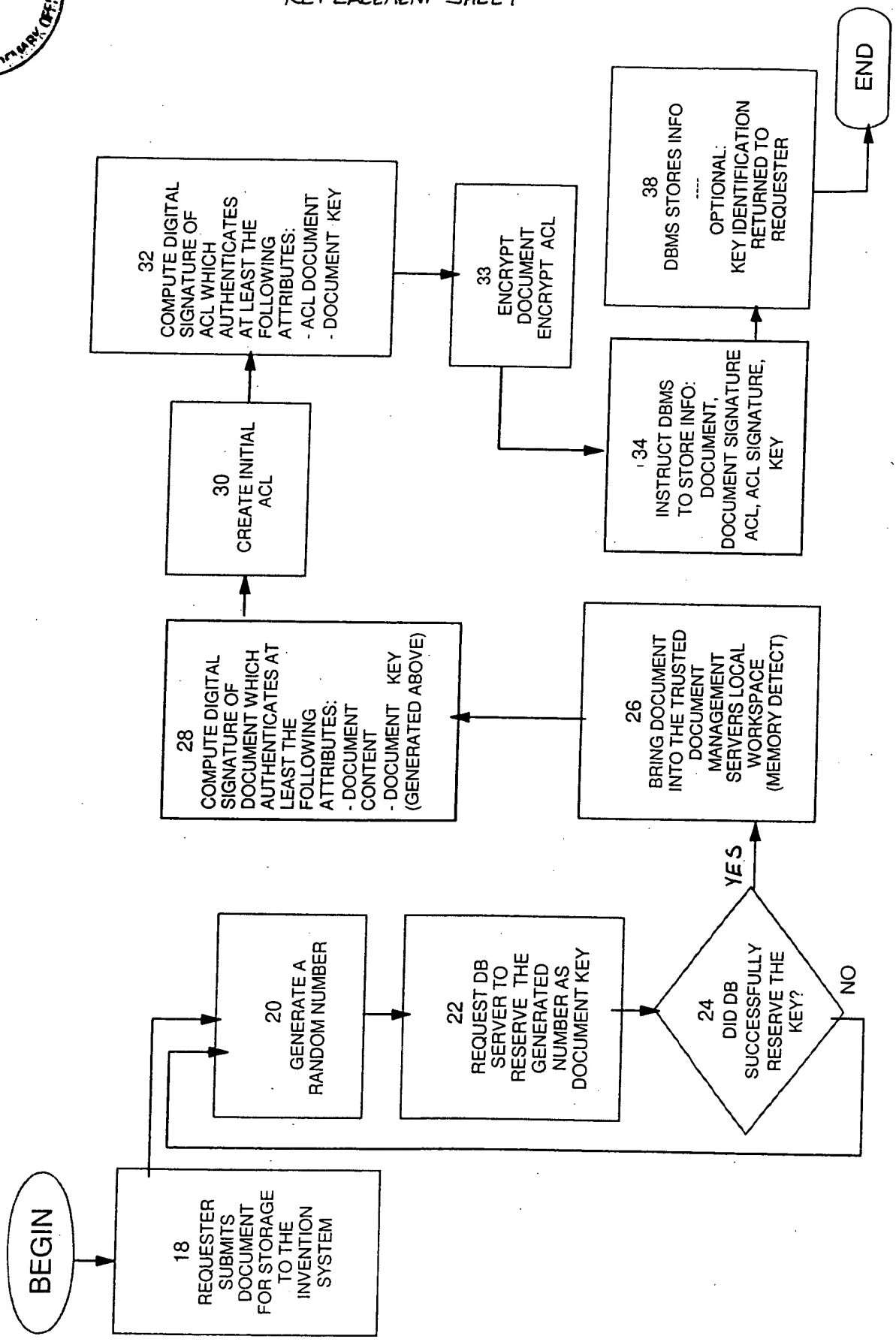


FIG. 5

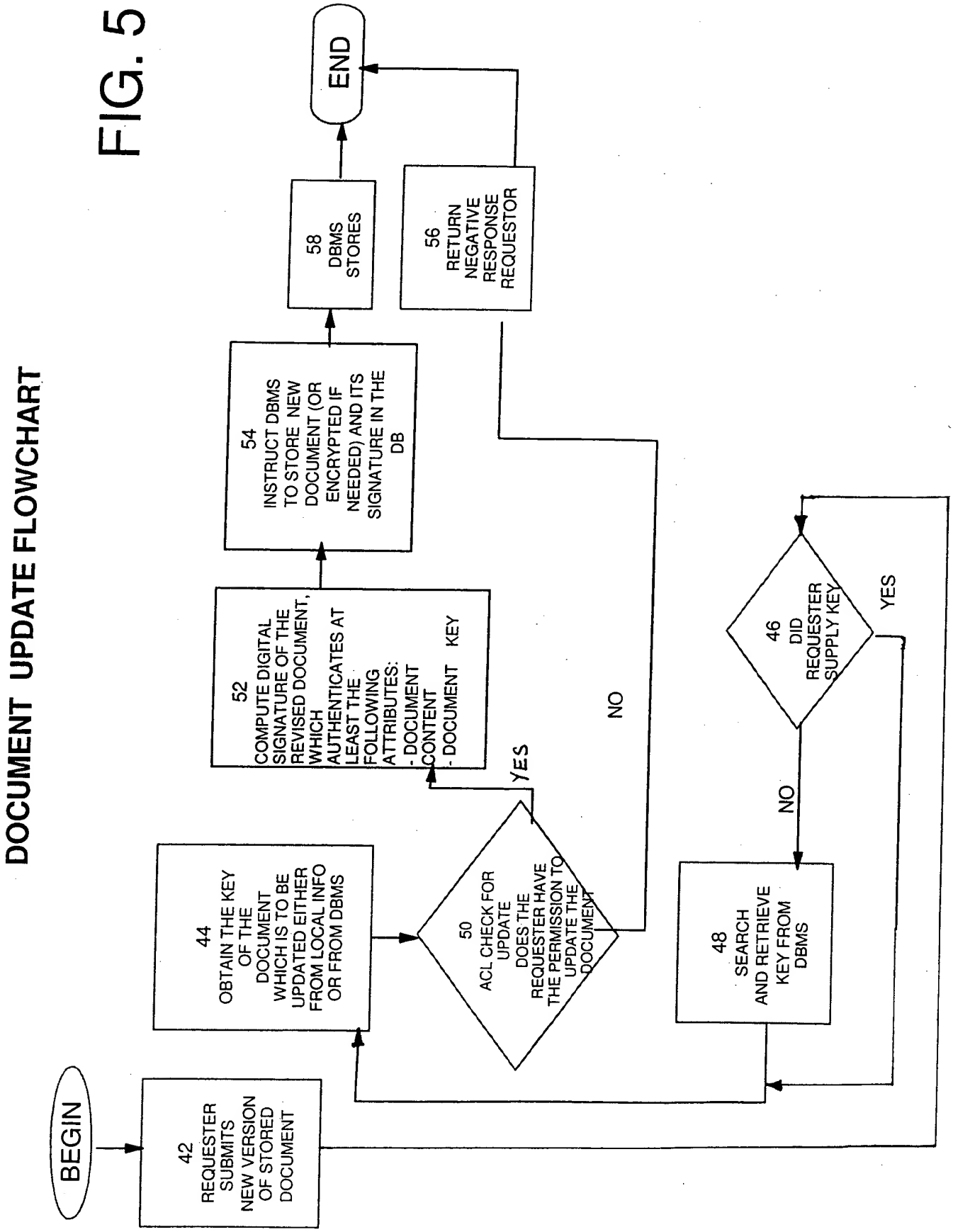

DOCUMENT UPDATE FLOWCHART
BEGIN
42
REQUESTER SUBMITS NEW VERSION OF STORED DOCUMENT
44
OBTAIN THE KEY OF THE DOCUMENT WHICH IS TO BE UPDATED EITHER FROM LOCAL INFO OR FROM DBMS
46
DID REQUESTER SUPPLY KEY
YES
NO
48
SEARCH AND RETRIEVE KEY FROM DBMS
50
ACL CHECK FOR UPDATE
DOES THE REQUESTER HAVE THE PERMISSION TO UPDATE THE DOCUMENT
YES
NO
52
COMPUTE DIGITAL SIGNATURE OF THE REVISED DOCUMENT, WHICH AUTHENTICATES AT LEAST THE FOLLOWING ATTRIBUTES:
- DOCUMENT CONTENT
- DOCUMENT KEY
54
INSTRUCT DBMS TO STORE NEW DOCUMENT (OR ENCRYPTED IF NEEDED) AND ITS SIGNATURE IN THE DB
56
RETURN NEGATIVE RESPONSE REQUESTOR
58
DBMS STORES
END

FIG. 6a

DOCUMENT RETRIEVAL FLOWCHART

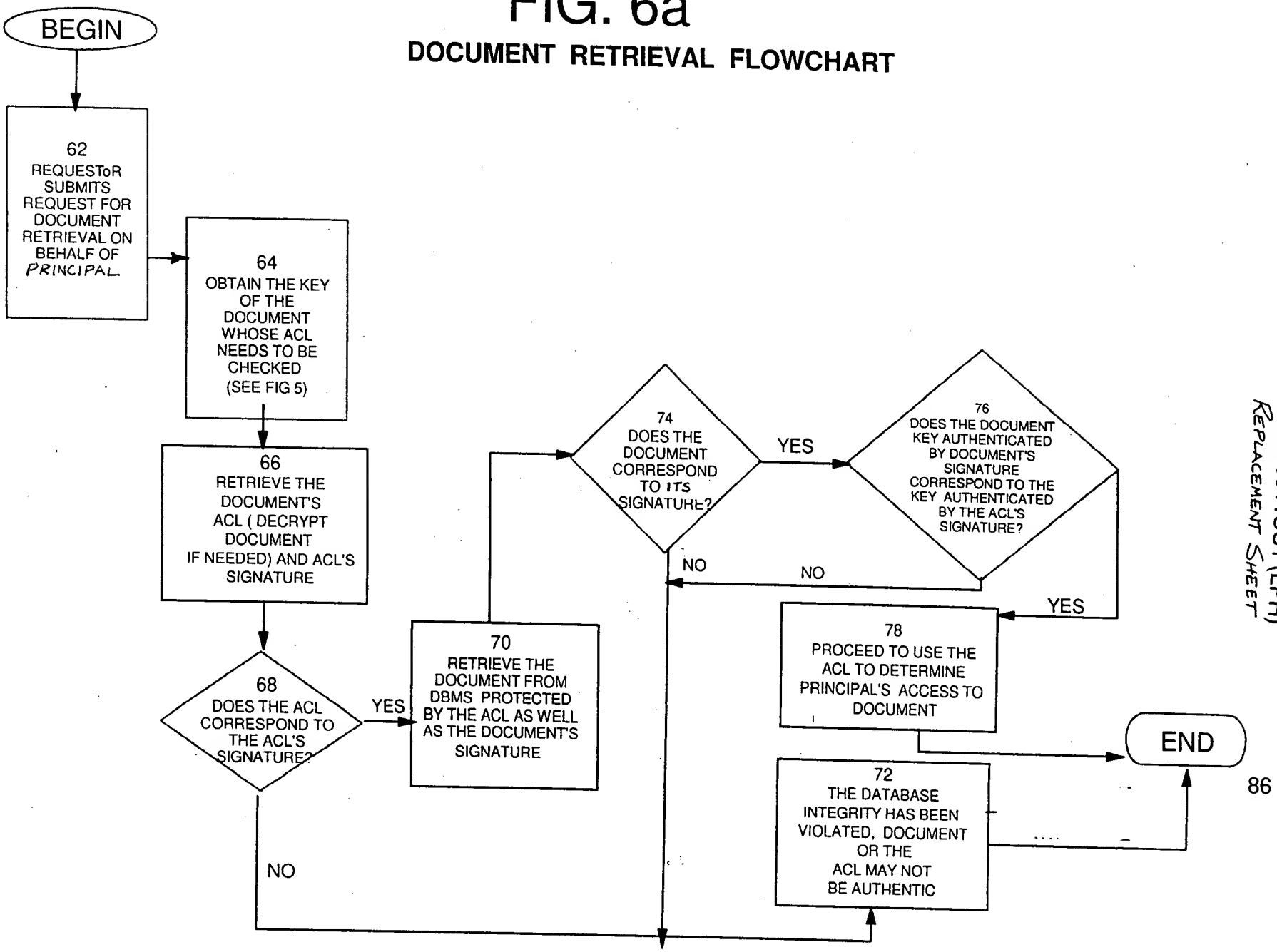


FIG. 6b (Cont'd)
DOCUMENT RETRIEVAL FLOWCHART

DETAIL OF RESPONSE

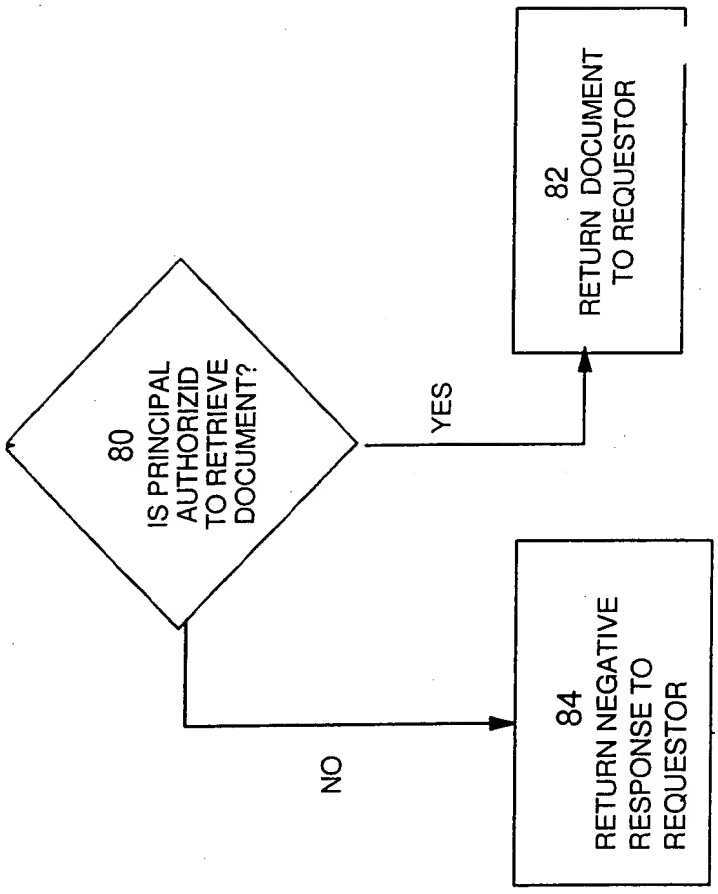


FIG. 7

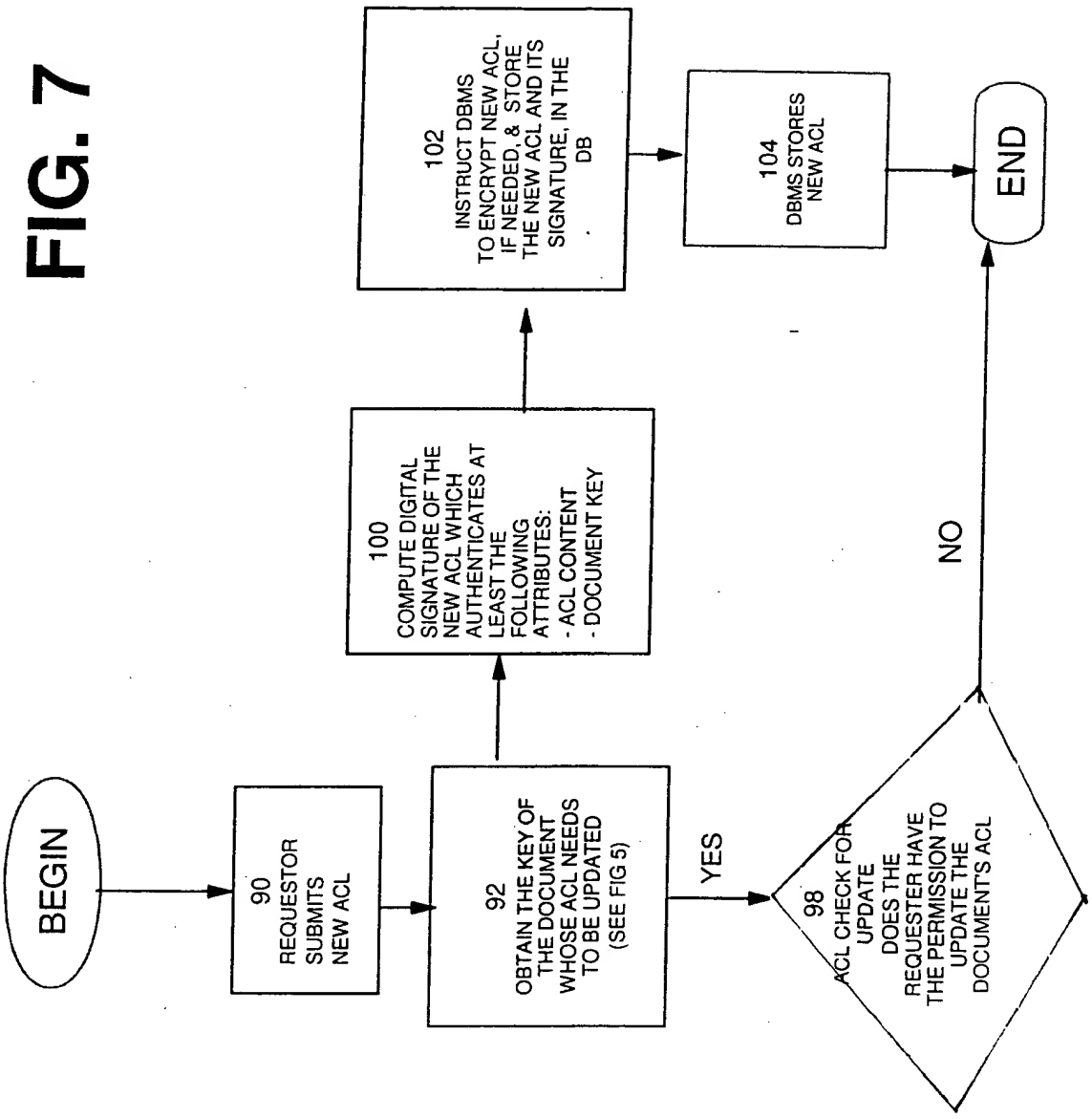
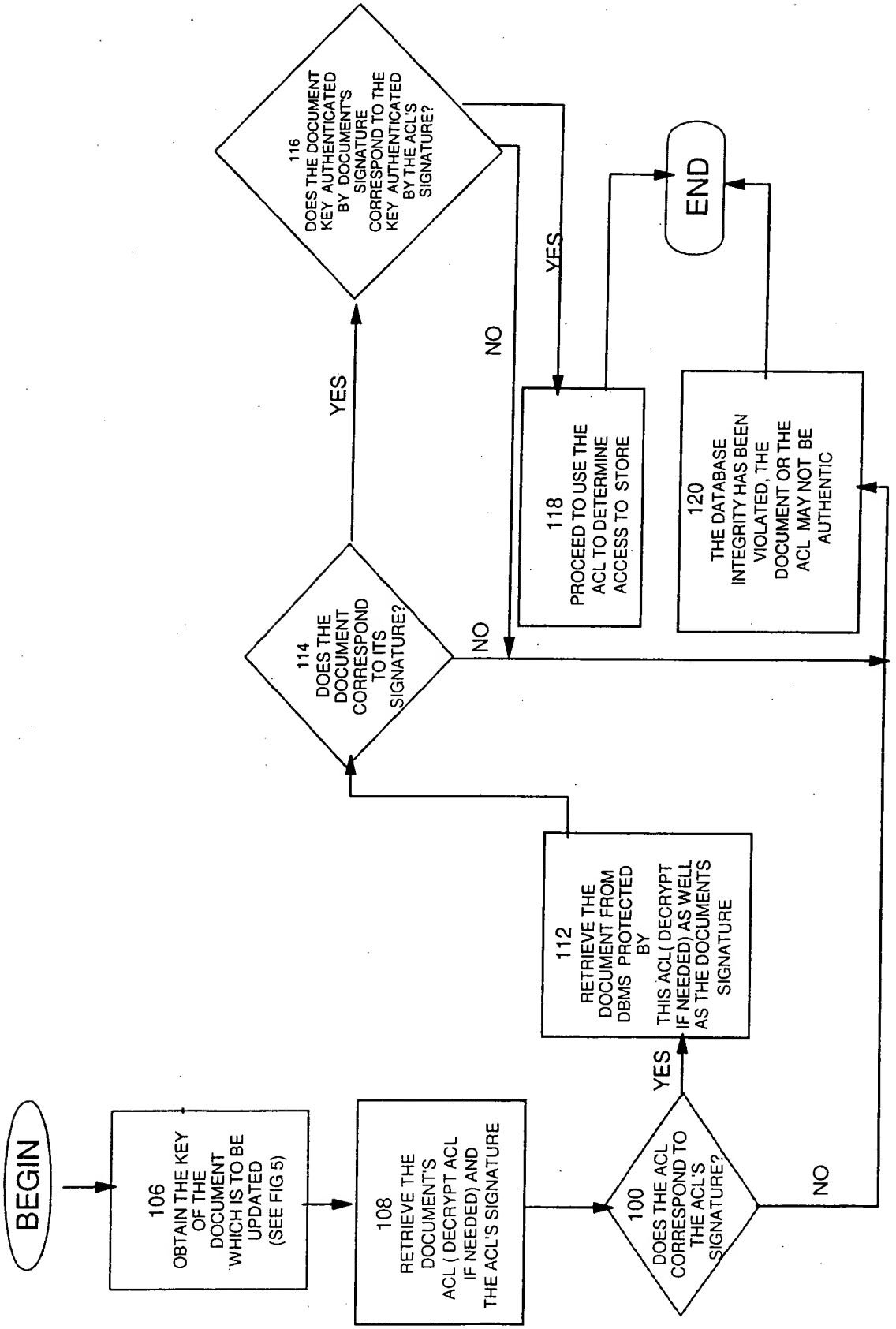

ACL UPDATE FLOWCHART
BEGIN
90
REQUESTOR SUBMITS NEW ACL
92
OBTAIN THE KEY OF THE DOCUMENT WHOSE ACL NEEDS TO BE UPDATED (SEE FIG 5)
YES
98
ACL CHECK FOR UPDATE DOES THE REQUESTER HAVE THE PERMISSION TO UPDATE THE DOCUMENT'S ACL
NO
100
COMPUTE DIGITAL SIGNATURE OF THE NEW ACL WHICH AUTHENTICATES AT LEAST THE FOLLOWING ATTRIBUTES:
- ACL CONTENT
- DOCUMENT KEY
102
INSTRUCT DBMS TO ENCRYPT NEW ACL, IF NEEDED, & STORE THE NEW ACL AND ITS SIGNATURE, IN THE DB
104
DBMS STORES NEW ACL
END

FIG. 8

ACL CHECK FLOWCHART